

**REMARKS**

Claims 26 through 41, 43 through 73 and 75 through 78 are pending in the application. Claims 1 through 25 and 74 were previously canceled. Claim 42 is canceled by the present amendment.

Applicants note with appreciation that the Examiner has allowed claims 52 through 73 and 76. Applicants also note that claims 29, 30, 34 through 36, 38 through 40 and 49 are objected to, but would be allowable if rewritten in independent form. However, Applicants believe, as explained below, that all of the pending claims are now in condition for allowance, and as such, claims 29, 30, 34 through 36, 38 through 40 and 49 do not need to be rewritten.

Concurrently with the present response, Applicants are submitting an Information Disclosure Statement with a PTO-1449 listing several references. Applicants respectfully request that the Examiner include a copy of the PTO-1449 with the next office communication, acknowledging that the Office considered the references.

On page 2 of the Office Action, claims 26 through 28, 31 through 33, 37, 41 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5, 002,379 to Murtha (hereinafter "the Murtha patent"). Of this set of claims, one is independent, namely claim 26. Applicant clarified a feature of claim 26 that is not disclosed by the Murtha patent. This feature was previously presented in claim 42.

Claim 26 provides for a collector for guiding light with a wavelength of  $\leq 193$  nm onto a plane. The collector includes, *inter alia*, a first mirror shell for receiving a first ring aperture section of the light, and a second mirror shell for receiving a second ring aperture section of the light. The light impinges with an angle of incidence of less than  $20^\circ$  to surface tangents of the first and second mirror shells.

The Office Action suggests that the Murtha patent discloses the features of claim 26 in FIGS. 18 through 20. In the Murtha patent, FIG. 18 is a view of a multisurface mirror as a light

source of normal incidence would see the multisurface mirror (col. 9, lines 22 – 24), and FIG. 19 is a cross-sectional view taken along line 19-19 of FIG. 18 (col. 9, lines 31 – 32). Incoming light energy, as represented by a ray 246, is reflected by an element 248 to a central receiver 252 (col. 9, lines 25 - 30). From FIGS. 18 and 19, it is apparent that ray 246 is at an angle of **greater than 20°** to a surface tangent of element 248. Thus, the Murtha patent does not disclose that light impinges with an angle of incidence of **less than 20°** to surface tangents of the first and second mirror shells, as recited in claim 26. As such, the Murtha patent does not anticipate claim 26.

Claims 27, 28, 31 through 33, 37, 41 and 43 depend from claim 26. By virtue of this dependence, claims 27, 28, 31 through 33, 37, 41 and 43 are all novel over the Murtha patent.

Reconsideration and withdrawal of the section 102(b) rejection of claims 26 through 28, 31 through 33, 37, 41 and 43 are respectfully solicited.

On page 4 of the Office Action, claims 44, 45 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Murtha patent in view of Schultz, which Applicants assume to mean U.S. Patent No. 6,198,793 to Schultz et al. (hereinafter "the Schultz et al. patent").

Applicants wish for the Office to note that the Schultz et al. patent was originally assigned to Carl-Zeiss-Stiftung Trading As Carl Zeiss, but on 21 JUL 2004, Applicants mailed a Recordation of Assignment transferring the assignment from (a) Carl-Zeiss-Stiftung Trading As Carl Zeiss, to (b) Carl Zeiss SMT AG. The present application is also assigned to Carl-Zeiss Semiconductor Manufacturing Technologies (SMT) AG. Thus, both of the subject matter of the Schultz et al. patent and the claimed invention of the present application were, at the time of the present invention was made, either owned by or subject to an obligation of assignment to the same entity. Accordingly, under such circumstances, Applicants do not believe that the Schultz et al. patent can be asserted in a section 103(a) rejection of the claims of the present application.

Claims 44 and 45 depend from claim 26. Applicants do not believe that either of the Murtha patent or the Schultz et al. patent disclose or suggest that light impinges with an angle of incidence of less than 20° to surface tangents of the first and second mirror shells, as recited in

claim 26. Also, as mentioned above, Applicants do not believe that the Schultz et al. patent can be asserted in a section 103(a) rejection of the claims of the present application. Therefore, Applicants submit that claim 26, as well as claims 44 and 45, are all patentable over the cited combination of the Murtha and Schultz et al. patents.

Claim 78 is an independent claim that provides for an illumination system. Applicants clarified that the illumination system includes a nested collector having a first mirror shell and a second mirror shell, and that light impinges with an angle of incidence of less than 20° to surface tangents of the first and second mirror shells. As explained above in support of claims 44 and 45, Applicants do not believe that either of the Murtha patent or the Schultz et al. patent disclose or suggest that light impinges with an angle of incidence of less than 20° to surface tangents of the first and second mirror shells. Also, as mentioned above, Applicants do not believe that the Schultz et al. patent can be asserted in a section 103(a) rejection of the claims of the present application. Accordingly, Applicants submit that claim 78 is patentable over the cited combination of the Murtha and Schultz et al. patents.

Applicants respectfully request reconsideration and withdrawal of the section 103(a) rejection of claims 44, 45 and 78.

On page 5 of the office action, claims 46 through 48, 50, 51, 75 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Murtha patent in view of Schultz, which Applicants assume to mean the Schultz et al. patent, and further in view of Chapman, which Applicants assume to mean U.S. Patent No. 6,186,632 to Chapman et al. (hereinafter "the Chapman et al. patent").

Claims 46 through 48, 50 and 51 depend from claim 26. Applicants do not believe that any of the Murtha patent, the Schultz et al. patent, or the Chapman et al. patent disclose or suggest that light impinges with an angle of incidence of less than 20° to surface tangents of the first and second mirror shells, as recited in claim 26. Also, as mentioned above, Applicants do not believe that the Schultz et al. patent can be asserted in a section 103(a) rejection of the claims of the present application. Therefore, Applicants submit that claim 26, as well as claims 46 through 48,

50 and 51, are all patentable over the cited combination of the Murtha, Schultz et al., and Chapman et al. patents.

Claim 75 is an independent claim that provides for a projection exposure system. The projection exposure system includes an illumination system that, in turn, includes a nested collector and an optical element having a plurality of raster elements in a light path downstream of the nested collector. The nested collector that has a focal point located upstream of the optical element. Applicants do not believe that any of the Murtha patent, the Schultz et al. patent, or the Chapman et al. patent disclose or suggest a nested collector that has **a focal point located upstream** of an optical element that has a plurality of raster elements in a light path downstream of the nested collector, as recited in claim 75. Also, as mentioned above, Applicants do not believe that the Schultz et al. patent can be asserted in a section 103(a) rejection of the claims of the present application. Accordingly, Applicants submit that claim 75 is patentable over the cited combination of the Murtha, Schultz et al., and Chapman et al. patents.

Claim 77 is an independent claim, and recites, *inter alia*, a nested collector having a first mirror shell and a second mirror shell, wherein the light impinges with an angle of incidence of less than 20° to surface tangents of the first and second mirror shells. Applicants do not believe that any of the Murtha patent, the Schultz et al. patent, or the Chapman et al. patent disclose or suggest that light impinges with an angle of incidence of less than 20° to surface tangents of the first and second mirror shells, as recited in claim 77. Also, as mentioned above, Applicants do not believe that the Schultz et al. patent can be asserted in a section 103(a) rejection of the claims of the present application. As such, Applicants submit that claim 77 is patentable over the cited combination of the Murtha, Schultz et al., and Chapman et al. patents.

Applicants respectfully request reconsideration and withdrawal of the section 103(a) rejection of claims 46 through 48, 50, 51, 75 and 77.

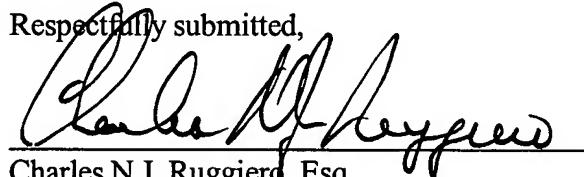
Applicants amended claims 26, 75, 77 and 78 to clarify features that are neither described nor suggested by the art of record. None of the amendments is intended to narrow the scope of any

term of any claim. Therefore, the doctrine of equivalents should be available for all of the terms of all of the claims.

In view of the foregoing, Applicants respectfully submit that all claims presented in this application patentably distinguish over the prior art. Accordingly, Applicants respectfully request favorable consideration and that this application be passed to allowance.

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Date

Respectfully submitted,



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